



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,609	07/30/2003	Shouji Katsumata	115922	6115

25944 7590 09/06/2005

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER

CHANG, CHING

ART UNIT PAPER NUMBER

3748

DATE MAILED: 09/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/629,609

Applicant(s)

KATSUMATA, SHOUJI

Examiner

Ching Chang

Art Unit

3748

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 4, 5 and 11-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 4-5, and 11-13 is/are allowed.
- 6) ☒ Claim(s) 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed on 06/27/2005.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. ***Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Albanello (US Patent 6,138,621) in view of Kobayashi et al. (US Patent 6,302,071).***

Albanello discloses an internal combustion engine (See Fig. 1), comprising: a head section (1); a block section (under 3) that includes a piston (under 2) and a crankshaft connected thereto; an electromagnetically driven valve (20, 24) driving one of an intake valve (7) and an exhaust valve (27), the electromagnetically driven valve formed in the head section; and a cam (28) driven valve formed in the head section and driving the other valve; a first lubricating oil passage (23, 26) being formed to the electromagnetically driven valve.

Albanello discloses the invention as recited above, however, fails to disclose the first lubricating oil passage being formed to the electromagnetically driven valve and the cam driven valve, and a second lubricating oil passage being formed to the block section including the piston and crankshaft.

The patent to Kobayashi on the other hand, teaches that it is conventional in the art of an oil passage system of valve moving apparatus, to utilize a first lubricating oil

passage (74) to an electromagnetically driven valve and a cam driven valve, and a second lubricating oil passage (73) being formed to the block section including the piston and crankshaft.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the first lubricating oil passage and the second lubricating oil passage as taught by Kobayashi in the Albanello device, since the use thereof would provide a more compact and effective engine lubrication system.

3. ***Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Albanello in view of Kobayashi (as applied to claim 14 above), and further in view of Hu (US Patent No. 5,680,841).***

The modified Albanello device discloses the invention, however, fails to disclose the lubricating oil supplied through the first lubricating oil passage to the electromagnetically driven valve having a different type from that of lubricating oil supplied through the second lubricating oil passage.

The patent to Hu on the other hand, teaches that it is conventional in the art of an engine with combined cam and electro-hydraulic engine valve control, to utilize a lubricating oil supplied through the lubricating oil passage to the electromagnetically driven valve having a different type from that of lubricating oil supplied through the other lubricating oil passage (See Col. 3, line 18 through Col. 4, line 13).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have utilized the different type lubricating oil (in viscosity)

supplied to the electromagnetically driven valve from that being supplied to other engine components as taught by Hu in the modified Albanello device, since the use thereof would provide an alternative choice on lubricating oil for an electromagnetically driven engine valve or other engine components, with respect to the engine operating conditions.

Allowable Subject Matter

4. Claims 1, 4-5, and 11-13 are allowed.

Response to Arguments

5. Applicant's arguments filed on 06/27/2005 have been fully considered but they are not persuasive.

Regarding the attorney's contention "Albanello does not disclose an electromagnetically driven valve" (See Page 6, Attorney's Remarks), the Examiner disagrees. As a matter of fact, the Albanello reference discloses "a preassembled sub-unit 20 incorporating all the electric and hydraulic device associated with the actuation of the intake valve....by means of a solenoid valve 24. The solenoid valve 24, which **may be of any known type**" (See Col. 3, line 44 through line 57), accordingly, the Examiner deems that the Albanello reference would teach "an electromagnetically driven valve driving one of an intake valve and an exhaust valve".

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ching Chang whose telephone number is (571)272-4857. The examiner can normally be reached on M-Th, 7:00 AM -5:00 PM.

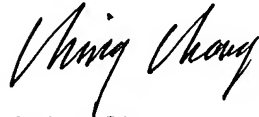
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571)272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Application/Control Number: 10/629,609
Art Unit: 3748

Page 6

Patent Examiner

A handwritten signature in black ink, appearing to read "Ching Chang".

Ching Chang

A handwritten signature in black ink, appearing to read "Thomas Denion".

THOMAS DENION
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700